

SPECIFICATIONS

Gateway 450RGH Notebook

Specifications are subject to change without notice or obligation.

Processor and Core Logic

Processor options	One Intel® Pentium® -M CPU To determine your notebook's processor speed, click Start, My Computer , then click View System Information . The processor speed is listed.
Processor packaging	Intel socketable micro-FCPGA2
Level 2 cache	1 MB with Advanced Transfer Cache Architecture
Core logic	Intel® 855PM chipset
Processor side bus speed	<ul style="list-style-type: none">▪ 400 MHz front side bus-OR-▪ 800 MHz front side bus
BIOS	<ul style="list-style-type: none">▪ Phoenix BIOS▪ 512 KB Flash ROM▪ SMBIOS 2.3 support▪ Advanced Configuration and Power Interface 1.0b and 2.0 (ACPI 1.0b and 2.0) support▪ Wired for Management 2.0 (WfM 2.0)

System memory

Memory type	333 MHz DDR-SDRAM
Memory expansion options	<ul style="list-style-type: none">▪ Two 200-pin industrial standard DDR-SODIMM sockets▪ Accepts two PC-2700 SDRAM memory modules▪ 2 GB maximum system memory▪ No on-board memory <p>To determine your notebook's memory, click Start, My Computer, then click View System Information. The memory is listed.</p>

Video

Graphics controller	<ul style="list-style-type: none">▪ ATI Mobility Radeon 9600 (M10)▪ 3D rendering acceleration
Video memory	64 MB or 128 MB
LCD display panel	15.0-inch active matrix (TFT) LCD color display Maximum panel resolution: 1400 × 1050 or 1600 × 1200 Maximum color depth: 32-bit (16.7 million colors)
LCD supported video modes	SXGA+ or UXGA
LCD maximum refresh rate	60 Hz
Controls	<ul style="list-style-type: none">▪ Brightness level selectable through FN keys (up, down)▪ Icon to display 8 levels of brightness▪ Auto dim on battery▪ Auto bright on AC power
External video	<ul style="list-style-type: none">▪ Supports dual display and extended desktop▪ Integrated TV encoder
External CRT resolutions	Supports standard IBM VGA compatible modes Maximum resolution: 2048 × 1536 × 32-bit colors
External CRT maximum refresh rate	200 Hz
TV out (composite video) jack	Supports NTSC/PAL connection to standard TV monitors with RCA jack
TV out (S-Video) jack	Supports NTSC/PAL connection to standard TV monitors with S-Video jack on optional port replicator
IEEE 1394	<ul style="list-style-type: none">▪ One 4-pin connector▪ 100/200/400mps▪ Supports video and audio capture▪ Software included for motion and still-frame capture

Audio

Audio chipset	Sigmatel® Soft Audio AC97 rev 2.3 codec (STAC9752)
Sound support	<ul style="list-style-type: none">▪ PCI interface audio▪ Multi-stream Direct Sound and Direct Sound 3D acceleration▪ SoundBlaster Pro, MIDI, Windows Sound System compatible, MP3, WMA▪ S/PDIF output for PCM or AC-3 content via Toslink jack on optional port replicator▪ PCI Power Management Interface (PPMI) 1.1 compliant <p>NOTE: This notebook does not have an internal microphone.</p>

Digital DVD audio	Provides full 5.1 channel Dolby Digital output (AC-3) from DVD decoder through Toslink optical S/PDIF jack on optional port replicator.
Volume controls	<ul style="list-style-type: none"> ▪ Volume control keys on keyboard ▪ Software control provided through Windows
Internal speakers	<ul style="list-style-type: none"> ▪ Stereo speakers built into front of notebook ▪ 1.5 W maximum output
Audio jacks	<ul style="list-style-type: none"> ▪ Stereo headphone output ▪ Stereo line input ▪ Monophonic microphone input

Communications

Modem features	<ul style="list-style-type: none"> ▪ Integrated V.92/56K data/fax modem ▪ Uses the RJ-11 jack on the back of the notebook ▪ Supports Wake on ring from S3 power mode
10/100/1000 Mbps Ethernet interface features	<ul style="list-style-type: none"> ▪ Integrated 1000BASE-T, 100BASE-TX, and 10BASE-T (802.3, 802.3u, and 802.3ab) Ethernet interface ▪ Uses the RJ-45 jack on the back of the notebook ▪ Supports Wake on LAN from S3 (suspend to RAM), S4 (Hibernate), and S5 (off) power modes. (S4 and S5 supported only when DC power is connected.)
Wireless Ethernet interface features (Factory installed option)	<ul style="list-style-type: none"> ▪ Intel® PRO/Wireless IEEE 802.11b network card embedded in the notebook -OR- ▪ Intel® PRO/Wireless IEEE 802.11b/g network card embedded in the notebook -OR- ▪ Broadcom BCM94306 IEEE802.11g network card embedded in the notebook -OR- ▪ Broadcom BCM94309 IEEE802.11a/g network card embedded in the notebook ▪ Antenna: Uses factory-installed internal antenna assembly <p>Operating channels: 11 selectable channels</p> <p>Security: 128 and 64 bit WEP encryption</p> <p>Operating Frequency</p> <ul style="list-style-type: none"> ▪ 2.4 GHz Direct Sequence Spread Spectrum (IEEE 802.11b and IEEE 802.11g) ▪ 5.0 GHz (IEEE 802.11a) <p>Maximum Data Rate</p> <ul style="list-style-type: none"> ▪ 54 Mbps (IEEE802.11g and IEEE 802.11a) ▪ 11 Mbps (IEEE802.11b)

Input/Output (I/O)

Keyboard

- U.S. English keyboard
- Full-sized 86-keys
- 19 mm × 19 mm key pitch
- 3.0 mm keystroke

Pointing device

- Gateway EZ-Pad™ touchpad
- 4-button design
- Optional EZ Point keyboard pointing device 3-button design

Optional fingerprint reader

- ST Micro TouchChip™ strip sensor
- Protector Suite QL software featuring:
 - Secure logon
 - Password bank
 - Pre-boot authentication
 - “My Safe” encrypted file folder

Multifunction buttons

Four “hot keys” that launch e-mail, Web browser, help application, and My Computer

LED status indicators

- Caps lock
- PAD lock
- Scroll lock
- Hard drive access
- Module bay access/bay swap
- Power/Suspend
- Battery status

Input/Output (I/O) ports

- Two USB 2.0 (4-pin)
- High-speed serial
- Parallel (bi-directional, EPP, ECP)
- IEEE 1394 (4-pin)
- V.92, 56K Modem (RJ-11)
- 10/100 Ethernet (RJ-45)
- External monitor (VGA)
- TV out (NTSC/PAL composite video)
- Stereo headphone output
- Stereo line input
- Monophonic microphone input
- PS/2 keyboard or mouse
- PC Card sockets (two Type II or one Type III)
- Docking port
- DC input

PCMCIA

- Accepts two Type II or one Type III device
- Ricoh R5C554 controller

NOTE: This notebook does not support Zoom Video.

Docking solution

Type	Port replicator
Docking supported	<ul style="list-style-type: none">▪ Hot dock▪ Warm dock▪ Cold dock
Input/Output (I/O ports)	<ul style="list-style-type: none">▪ Two USB 2.0 (4-pin)▪ High-speed serial▪ Parallel▪ Modem (RJ-11)▪ Ethernet (RJ-45)▪ External monitor (VGA)▪ S-Video TV out▪ S/PDIF digital audio out▪ Stereo headphone output▪ Analog audio line input (stereo)▪ Two PS/2▪ Docking port▪ DC input
Security	Kensington lock loop

Storage

Hard drive controller	Supports up to Ultra DMA 100 and up to PIO mode 4
Hard drive	<ul style="list-style-type: none">▪ User removable▪ 2.5-inch diameter▪ 9.5 mm height <p>To find the hard drive capacity, click Start, then click My Computer. Right-click the drive letter, then click Properties. The drive's capacity and available space appear. If the drive has multiple partitions (for example, C: and D:), add the capacities of each partition to determine the drive's total capacity.</p>
Super I/O controller	<ul style="list-style-type: none">▪ NS PC87391 LPC super I/O controller▪ Diskette drive controller▪ IEEE 1284 compliant parallel port▪ Serial port

Modular bay

One modular bay is available on the notebook. The modules are hot-swappable.

Optical Drive

Available optical drives include:

- CD
- DVD
- Combination DVD/CD-RW
- DVD-RW/CD-RW

To determine the type of drive in a bay, examine the drive tray's plastic cover. A CD Compact Disc logo indicates a CD drive, a DVD logo indicates a DVD drive, a DVD logo in combination with a CD-R/RW logo indicates a DVD drive that also is a recordable/rewritable CD drive, and a DVD-ROM/R/RW logo in combination with a CD-R/RW logo indicates a recordable/rewritable DVD drive that also is a recordable/rewritable CD drive.

Second Hard Drive

- 2.5-inch diameter
- 12.7 mm or 9.5 mm high

Diskette Drive

- 12.7 mm high
- 3.5-inch diskettes
- 720K/1.2M/1.44M support

Memory Card Reader

Supports the following card types:

- CompactFlash[®]
- IBM Microdrive[™]
- Memory Stick[®]
- MultiMediaCard[™]
- Secure Digital[™]
- SmartMedia[™]

Secondary Battery

- Removable six-cell prismatic Lithium Ion battery pack
- 3.4 Ah
- 11.1 V nominal
- 37.74 Wh

Power

Intelligent charger

Supports dynamic charge current to achieve the best charge performance

AC adapter

- 19 VDC, 4.74A, 90 W output
- Automatically adjusts for 100 to 240 VAC, 50 to 60 Hz power source
- Three-wire design
- Includes power LED

Battery type	<p>Main</p> <ul style="list-style-type: none"> ▪ Removable eight or six-cell Lithium Ion battery pack ▪ Embedded controller inside to support smart battery <p>Secondary</p> <ul style="list-style-type: none"> ▪ Removable six-cell prismatic Lithium Ion battery pack
Battery capacity	<p>Main</p> <p>8-cell:</p> <ul style="list-style-type: none"> ▪ 4.2 Ah ▪ 14.8 V nominal ▪ 62.16 Wh <p>6-cell:</p> <ul style="list-style-type: none"> ▪ 3.8 Ah ▪ 11.1 V nominal ▪ 42.18 Wh <p>Secondary</p> <ul style="list-style-type: none"> ▪ 3.4 Ah ▪ 11.1 V nominal ▪ 37.74 Wh <p>Battery life varies depending on configuration, programs, power management settings, and features used. Recharge time varies, depending on usage.</p>
Power management	<ul style="list-style-type: none"> ▪ Advanced Configuration and Power Interface 1.0b or later (ACPI 1.0b or later) support ▪ SMBIOS 2.3 ▪ PC 2001 compliant ▪ CPU supports Intel[®] Speedstep[™] technology
Controls	<ul style="list-style-type: none"> ▪ Keyboard-activated pop-up display gives battery charge as a percentage remaining ▪ Icon on taskbar shows battery charge as a percentage remaining ▪ Battery meter on battery
Power switch	Supports Power On/Off, Standby/Resume, Hibernate, Shutdown
Reset hole	Resets whole system if notebook cannot be recovered by power switch
Lid switch	LCD On/Off, Standby, Hibernate

Security

Passwords

- Power-on password (2-level password support)
- Hard drive password
- Fingerprint reader authentication Windows login and pre-boot security

Physical

- Main system memory compartment screw
- Hard drive kit screw
- Mini PCI bay security screw
- Kensington® security slot on notebook right side
- Kensington® security ring on port replicator

System software

Operating system

- Microsoft® Windows® XP Professional
- Microsoft® Windows® XP Home Edition

System management

- SMBIOS 2.3 BIOS support
- Advanced Configuration and Power Interface (ACPI) power management
- Support for Wake on LAN from S3, S4, and S5 power modes
- Support for Intel® LANDesk® Client manager 6.0
- Wired for Management 2.0 (WfM 2.0) enabled

System compatibility

- PC2001 specification
- Advanced Configuration and Power Interface 1.0b and 2.0 (ACPI 1.0b and 2.0) support
- SMBIOS 2.3
- Windows Hardware Quality Labs (WHQL) certified

Quick boot

Supported

Physical specifications

Dimensions

15.0-inch display

~13.15 × 10.63 × 1.3 in. (W × D × H)

~334 × 270 × 33 mm (W × D × H)

System weight

15.0-inch display (includes DVD drive and 6-cell battery)

~6.11 lbs.

~2.77 kg

AC adapter weight

17.5 or 18.9 ounces (500 or 540 grams) (depends on adapter)

Environment

Operating temperature	41°F to 95°F (5°C to 35°C)
Storage temperature	-4°F to 140°F (-20°C to 60°C)
Operating humidity	20% to 80% relative humidity; no condensation
Storage humidity	10% to 90% relative humidity; no condensation
Operating altitude, maximum	8,000 feet at 59°F (2,438 meters at 15°C)
Storage altitude, maximum	12,000 feet (3,658 m)

MAN SYS 450 RGH SPEC R1 6/04



8510055